

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 7-11 and 13-16 are pending in this application. Claims 7-11, 13, 14 and 15 are amended without introducing any new matter and Claims 1-6 and 17 were cancelled without prejudice or disclaimer by the present response.

In the outstanding Office Action, Claim 14 was rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement; Claims 1-4, 6-11, 13 and 15-17 were rejected under 35 U.S.C. §102(b) as anticipated by Corcoran (Mapping Home-Network Appliances to TCP/IP Sockets Using a Three-Tiered Home Gateway Architecture); Claim 5 was rejected under 35 U.S.C. §103(a) as unpatentable over Corcoran and what is known in the art as evidenced by Cheng (U.S. Pat. Pub. No. 2002/0083143); and Claim 14 was rejected under 35 U.S.C. §103(a) as unpatentable over Corcoran.

With regard to the rejection of Claim 14 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement, Applicants respectfully submit that Claim 14 has been amended to overcome the rejection. Specifically, Claim 14 has been amended to recite “said gateway devices are connected by an IP based connection.” Accordingly, Applicants respectfully request that the rejection of Claim 14 under 35 U.S.C. §112, first paragraph, be withdrawn.

Addressing now the rejection of Claims 1-4, 6-11, 13 and 15-17 under 35 U.S.C. §103(a) as unpatentable over Corcoran, this rejection is respectfully traversed.

Amended Claim 7 recites,

An intelligent gateway for communicating between gateway devices via a common network layer, wherein each gateway device is connected to a respective bus system that includes a physical device, comprising:

a device presenter and a device emulator for one physical device of the gateway devices, wherein the device

emulator is configured to emulate a corresponding physical device, the corresponding physical device being associated with one bus system, for communication with physical devices of other bus systems; and

an isochronous stream handler adapted to be controlled by said device presenter or said device emulator.

Corcoran describes a three-tier gateway architecture for internetworking between a home automation network and a TCP/IP based wide area network.

However, Corcoran does not describe or suggest a device presenter and a device emulator for one physical device of the gateway devices, wherein the device emulator is configured to emulate a corresponding physical device, the corresponding physical device being associated with one bus system, for communication with physical devices of other bus systems.

The outstanding Action states on page 4 that page 732, RHC and paragraphs 4-5 of Corcoran describe this feature. Applicants respectfully traverse this assertion.

Specifically, Corcoran describes on page 732, RHC, paragraph 4, a tier-II agent that builds up a picture of the device on the home network. The tier-II agent is implemented via CAL-NETd, see section 4, paragraph 1, which runs on an interface gateway, Fig. 4. Further Corcoran describes that functionality of the “picture of the device” on page 731, LHC, paragraph 3 and on page 730, LHC, section 2.1 which states that the interface gateway maintains a single state model of the home network. Moreover, Corcoran describes that information about type and state of the devices on the home network are imaged in the interface gateway.

However, Corcoran never describes an emulation of the device on the home network which includes an intelligent gateway having a device emulator for a first device on a first bus system that simulates the first device such that the first device may be directly accessed from a second, different bus system as if it was directly connected to the second bus system. This is the case at least because Corcoran, which targets remote user access to home networks

(see page 7831, LHC, last paragraph and page 732, RHC, first paragraph), does not require emulated devices.

Furthermore, Corcoran describes on page 732, RHC in paragraph 5 that the SIOd must act as a proxy for a pseudo-device. The pseudo-device is a TCP/IP exported user-interface (virtual device) to a device on the home network, see page 732, RHC paragraph 4, lines 1-4. The user-interface is a program block simulating a physical interface of the device, e.g. button and displays, knobs and scales. A remote user accesses the user-interface in lieu of the physical interface.

However, the SIOd of Corcoran differs from the intelligent gateway recited in Claim 7, at least because the SIOd communicates between an intelligent gateway and a bus system while the claimed invention recites an intelligent gateway that communicates between two gateway devices. Thus, while the claimed invention recites an intelligent gateway that communicates between devices on the same bus (common network layer), Corcoran describes a SIOd that communicates between two different bus systems.

Moreover, the proxy device described on page 732, RHC, paragraph 5 of Corcoran simulates an exportable user-interface for a first home network for access via the common network. The device emulator according to Claim 7, however, emulates a physical device of a first bus system for the other bus systems. The emulator is specific for each bus system accessing the device emulator. In contrast, the user-interface of Corcoran contains no information about other bus systems. Thus, while the emulator of the claimed invention is configured to directly communicate with other physical devices on other bus systems, the user-interface of Corcoran (“virtual device”) communicates with the corresponding physical device and the remote user. The other devices must access the “state model” managed in the tier II/II gateway.

Accordingly, Applicants respectfully submit that Claim 7 patentably distinguishes over Corcoran.

Moreover, with regard to Claim 15, Applicants respectfully submit that Claim 15 also patentably distinguishes over Corcoran.

Claim 15 recites, in part,

a first device connected to a first gateway via a first bus system;
a second device connected to a second gateway via a second bus system;
an intelligent gateway connected to said first and second gateways, comprising a first device emulator configured to emulate said first device on said second bus system, and a second device emulator configured to emulate said second device on said first bus system; and
an isochronous stream handler, which is controller by said first device emulator or said second device emulator.

The outstanding Action states on pages 5-6 that page 733, sect. 3.3 and page 734, sec. 4.2.1 describe the features of Claim 15, Applicants respectfully traverse this assertion.

Specifically, section 3.3 of page 733 of Corcoran generally describes the transfer of high bandwidth data such as synchronous audio and video streams. Section 4.2.1 of page 734 of Corcoran describes that the single middleware agent (interface gateway) may be requested to route messages between several independent home networks.

However, Corcoran never describes or suggests an intelligent gateway connected to said first and second gateways, comprising a first device emulator configured to emulate said first device on said second bus system, and a second device emulator configured to emulate said second device on said first bus system.

On page 731, LHC, paragraph 3, Corcoran describes that the interface gateway maintains a single state model, the model being a virtual representation of the whole home network. A message sent between two different home networks may be performed via the state model. Corcoran describes a system in which the “states” of devices of different home

networks are managed in an intelligent gateway device. However, Corcoran never describes a first device emulator that emulates said first device on said second bus system, and a second device emulator that emulates said second device on said first bus system.

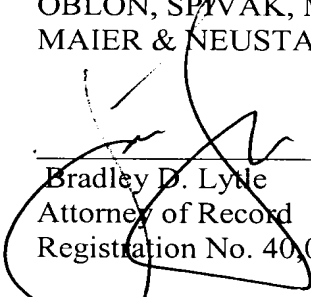
Thus, while Corcoran is directed to an Internet enabled household (see Fig. 2) in which a remote access client can access the home network via an intelligent gateway in order to maintain the state of the home network, Claim 15 recites a device which enables a data exchange between two networks via a common network layer. Thus, the features recited in Claim 15 are not disclosed in Corcoran.

Accordingly, Applicants respectfully submit that Claims 7 and 15 and claims depending respectively therefrom patentably distinguish over Corcoran.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 7-11 and 13-16 is earnestly solicited.

Respectfully submitted,

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